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EXAMINER	
WONG, BLANCHE	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/754,490	REFAI ET AL.	
	Examiner	Art Unit	
	Blanche Wong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-18 and 20-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-7,10-17,20,21,23,24,27,29-36,39,40,43* is/are rejected.

7)☒ Claim(s) *2,3,8,9,15,16,18,22,25,26,28,37,38,41,42 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 19, 2007 have been fully considered but they are not persuasive.

With regard to independent claims 1,24,32,36, Applicant states "in the art of cellular communications, a 'radio configuration' is a set of traffic channel transmission formats that are characterized by physical layer parameters such as transmission rates, modulation characteristics and spreading rate". Remark, p.13, para. 1. However, Examiner respectfully disagrees.

2. If Applicant is arguing that it is radio configuration in cellular communications, such a limitation is not recited in the claims.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., cellular communications) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. If Applicant is arguing that a radio configuration is a set of traffic channel transmission formats that are characterized by physical layer parameters, such a limitation is not recited in the claims.

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a set of traffic channel transmission formats that are characterized by physical

layer parameters) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. Examiner notes that as defined in American Heritage College Dictionary, 4th ed., "configuration" means "arrangement of parts or elements". It follows that "radio configuration" means an arrangement of radio parts or elements. A channel is a radio part or element. Channels are arranged into pilot channels and traffic channels. Pilot channels and traffic channels are two different arrangements of radio parts or elements. Therefore, pilot channels and traffic channels are two different radio configurations.

7. With regard to independent claims 1,24,32,36, Applicant states "Tiedemann does not disclose or suggest interactions of a terminal with nodes that have different sets of radio configurations because, as noted above, Tiedemann does not discuss selecting from among plurality of radio configurations." Remark, p.13, para. 2. Examiner respectfully disagrees.

8. If Applicant is arguing "interactions of a terminal with nodes that *have* different sets of radio configurations" (with emphasis), such a limitation is not recited in the claims.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., interactions of a terminal with nodes that have different sets of radio configurations) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. If Applicant is arguing "selecting from among plurality of radio configurations", such a limitation is not recited in the claims.

11. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., selecting from among plurality of radio configurations) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. With regard to claim 14, Applicant states that "Fauconnier does not discuss operations of base stations having different sets of radio configurations". Remark, p.14, para. 2. However, Examiner respectfully disagrees.

13. In response to applicant's arguments, the recitation "from a first base station supporting a first set of radio configurations to a second base station supporting a second set of radio configurations that is different than the first set of radio configurations" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

14. With regard to claim 14, Applicant states that "the description of handover in Fauconnier presumes that a common radio configuration is already in use". Remark, p.14, para. 2. Examiner respectfully disagrees.

15. It is inherent in a soft handover, as oppose to a hard handover, that there is a common radio configuration that is available for the first and second base stations to establish a soft handover.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. **Claims 1,5-7,10-13,24,27,29-36,39** are rejected under 35 U.S.C. 102(e) as being clear anticipated by Tiedemann, Jr. (U.S. Pat No. 6,307,849).

With regard to claims 1 and 36, Tiedemann discloses wireless communication communicating between the wireless terminal **(mobile 18 in Fig. 1, col. 4, lines 49)** and a first node **(base station 12 in Fig. 1, col. 4, line 48)** according to a first radio configuration of a first set of radio configurations **(single carrier wireless CDMA communications, col. 4,lines 49-50)** supported by the first node;

identifying **(pilot channels are identified by pilot PN code shifts whereas traffic channels are identified by different Walsh codes) (the pilot channels are distinguished from the traffic channels transmitted from the same base station by different Walsh codes. The respective pilot channels from different base stations are distinguished from one another by pilot PN code shifts, col. 5, lines 28-32)** a second radio configuration available for a second node **(base station 16 in Fig. 1, col. 4, line 48)** that supports a second set of radio configurations **(pilot channels)** that is different from the first set of radio configurations **(traffic channels)**; and

simultaneously communicating **(soft handoff, col. 5, line 27; see also soft handoff is the process simultaneously interfacing a mobile with two or more base stations, col. 1, lines 49-51; see also at least one connection is maintained at all times, col. 1, lines 56-57) (the respective pilot channels simultaneously communicate its signal power with the mobile and the stronger signal power induce handoff to the respective base station)(the pilot channel received at the mobile from the base station 16 would expect to be larger in received signal power than ... base station 12 because the mobile is closest to the base station 16, col. 5, lines 35-38)** between the wireless terminal and respective ones of the first and second nodes according to the identified second radio configuration **(pilot channels)** using a common channel coding including a common spreading code **(common spreading code) (see also the pilot channel transmitted by each base station uses a common spreading code, col. 2, lines 4-5)**.

With regard to claim 5, Tiedemann discloses a method according to claim

Tiedemann further discloses

receiving first and second signals transmitted from respective ones of the first and second nodes **(base stations)** at the wireless terminal **(mobiles) (" ... base stations transmit to mobiles on the same frequency band, and mobiles transmit to base station on a second frequency band, is that "soft handoff"...", col. 1, lines 44-47; see also each base station transmits a respective pilot channel that is used by the mobiles, col. 1, line 67-col. 2, line 1)**; and

processing the first and second signals according to a common process **(the handoff)**.

With regard to claim 6, Tiedemann discloses a method according to claim 5. Tiedemann further discloses

wherein receiving first and second signals transmitted from respective ones of the first and second nodes at the wireless terminal comprises receiving a composite **(combines)** signal including the first and second signals **(the mobile receives the signals from the set of base stations and combines them, col. 2, lines 10-12)**; and

wherein processing the first and second signals according to a common process comprises processing the composite signal according to a RAKE process **(rake) (the digital data receivers cooperate with the diversity combiner/decoder to form a "rake" receiver structure, col. 7, lines 58-60; see also digital data receivers included in mobile, col. 7, lines 49-50)**.

With regard to claims 7,29,35,39, Tiedemann discloses a method according to claim 1, system according to claim 24, a terminal according to claim 32, and a system according to claim 37 respectively. Tiedemann further discloses CDMA radio configuration **(CDMA, col. 1, line 10; see also col. 4, line 27)**.

With regard to claim 10, Tiedemann discloses a method of claim 1. Tiedemann further discloses identifying the second node as a best candidate node **(relative)** according to a predetermined criterion **(quality) (determine [handoff] ... based on the relative pilot channel qualities, col. 6, line 23)**.

With regard to claims 11 and 33, Tiedemann discloses a method according to claim 1 and a terminal according to claim 32 respectively. Tiedemann further discloses simultaneously communicating **(soft handoff)** is preceded by requesting communication according to the second radio configuration **(pilot channel)** from the wireless terminal **(toward the end of the soft handoff region, only one base station's signal remains within the mobile's active set, col. 6, lines 40-41)**.

With regard to claims 12,27,34, Tiedemann discloses a method according to claim 1, a system according to claim 24, and a terminal according to claim 32 respectively. Tiedemann further discloses simultaneously communicating **(soft handoff)** is preceded by commanding the wireless terminal **(the one base station)** to communicate according to the second radio configuration **(pilot channel)**.

With regard to claim 13, Tiedemann discloses simultaneously communicating is followed by terminating communications **(after a handoff to a second node, there is a termination at the first node)** between the wireless terminal and the first node while continuing communications between the wireless terminal and the second node.

With regard to claim 24, Tiedemann discloses wireless communications system comprising:

a first node **(base station 12 in Fig. 1, col. 4, line 48)** operative to communicate with a wireless terminal **(mobile 18 in Fig. 1, col. 4, lines 49)** according to any of a first set of radio configurations **(single carrier wireless CDMA communications, col. 4,lines 49-50)**; and

a radio configuration control circuit **(system controller 10 in Fig. 1, col. 4, line 29)** operative to identify **(pilot channels are identified by pilot PN code shifts whereas traffic channels are identified by different Walsh codes) (the pilot channels are distinguished from the traffic channels transmitted from the same base station by different Walsh codes. The respective pilot channels from different base stations are distinguished from one another by pilot PN code shifts, col. 5, lines 28-32)** a common radio configuration **(pilot channels)** of the first set of radio configurations that is also a member of a second set of ratio configurations **(pilot channels)** supported by a second node **(base station 16 in Fig. 1, col. 4, line 48)** and to responsively cause the first and second node to simultaneously communicate **(soft handoff, col. 5, line 27; see also soft handoff is the process simultaneously interfacing a mobile with two or more base stations, col. 1, lines**

49-51; see also at least one connection is maintained at all times, col. 1, lines 56-57) (the respective pilot channels simultaneously communicate its signal power with the mobile and the stronger signal power induce handoff to the respective base station)(the pilot channel received at the mobile from the base station 16 would expect to be larger in received signal power than ... base station 12 because the mobile is closest to the base station 16, col. 5, lines 35-38) with the wireless terminal according to the identified common radio configuration **(pilot channels)** using a common channel coding including a common spreading code **(common spreading code) (see also the pilot channel transmitted by each base station uses a common spreading code, col. 2, lines 4-5)**.

With regard to claim 30, Tiedemann discloses a system according to claim 24. Tiedemann further discloses the first node comprises a base station **(base stations)**.

With regard to claim 31, Tiedemann discloses a system according to claim 24. Tiedemann further discloses the radio configuration is positioned at a mobile switching center **(system controller 10 in Fig. 1, col. 4, line 29)**.

With regard to claim 32, see analysis for claim 1 where a transceiver circuit is the mobile and a radio configuration control circuit is the system controller 10 in Fig. 1, col. 4, line 29. Tiedemann discloses wireless communications system comprising:

a transceiver circuit **(mobile 18 in Fig. 1, col. 4, lines 49)** operative to communicate according to a set of radio configurations **(single carrier wireless CDMA communications, col. 4,lines 49-50)**; and

a radio configuration control circuit **(system controller 10 in Fig. 1, col. 4, line 29)** coupled to the transceiver circuit and operative to cause the transceiver circuit to communicate with a first node **(base station 12 in Fig. 1, col. 4, line 48)** using first radio configuration **(traffic channels)** of the set of radio configurations, to identify **(pilot channels are identified by pilot PN code shifts whereas traffic channels are identified by different Walsh codes) (the pilot channels are distinguished from the traffic channels transmitted from the same base station by different Walsh codes. The respective pilot channels from different base stations are distinguished from one another by pilot PN code shifts, col. 5, lines 28-32)** a second radio configuration **(pilot channels)** of the set of radio configurations supported by a second node **(base station 16 in Fig. 1, col. 4, line 48)**, and to responsively cause the transceiver circuit **(mobile 18 in Fig. 1, col. 4, lines 49)** to simultaneously communicate **(soft handoff, col. 5, line 27; see also soft handoff is the process simultaneously interfacing a mobile with two or more base stations, col. 1, lines 49-51; see also at least one connection is maintained at all times, col. 1, lines 56-57) (the respective pilot channels simultaneously communicate its signal power with the mobile and the stronger signal power induce handoff to the respective base station)(the pilot channel received at the mobile from the base station 16 would expect to be larger in received signal power than ... base station 12 because the mobile is closest to the base station 16, col. 5, lines 35-38)** with respective ones of the first and second

nodes according to the second radio configuration **(pilot channels)** using a common channel coding including a common spreading code **(common spreading code) (see also the pilot channel transmitted by each base station uses a common spreading code, col. 2, lines 4-5)**.

Claim Rejections - 35 USC § 103

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. **Claims 14,17,20-23,40,43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fauconnier (U.S. Pat No. 7,043,244) in view of Tiedemann.

With regard to claims 14 and 40, Fauconnier discloses

determining whether a common radio configuration **(common radio configuration)** having a common channel coding including a common spreading code is available for the first and second base stations; and

handing off **(soft handover)** the wireless terminal **(mobile terminal)** from the first base station to the second base station based on the determination of whether a common radio configuration is available for the first and second base stations **(When a mobile terminal is in soft handover there is a common radio configuration of the radio links between the different base station and the mobile terminal, col. 7, lines 30-32)**.

However, Fauconnier fails to explicitly show a common radio configuration having a common channel coding including a common spreading code.

Tiedemann discloses a common radio configuration **(pilot channel)** having a common channel coding including a common spreading code **(common spreading code) (the pilot channel transmitted by each base station uses a common spreading code, col. 2, lines 4-5; see also mobiles transmit to base station on a second frequency band, col. 1, lines 45-46)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a common radio configuration having a common channel coding including a common spreading code as taught in Tiedemann with Fauconnier for a soft handoff.

With regard to claims 17 and 43, the combination of Fauconnier and Tiedemann discloses a method according to claim 14 and a system according to claim 40 respectively. Fauconnier further discloses a soft handoff **(soft handover, col. 7,line 30)**.

With regard to claim 20, the combination of Fauconnier and Tiedemann discloses a method according to claim 14.

Tiedemann further discloses

receiving first and second signals transmitted from respective ones of the first and second nodes **(base stations)** at the wireless terminal **(mobiles) (" ... base stations transmit to mobiles on the same frequency band, and mobiles transmit**

to base station on a second frequency band, is that "soft handoff"...", col. 1, lines 44-47; see also each base station transmits a respective pilot channel that is used by the mobiles, col. 1, line 67-col. 2, line 1); and

processing the first and second signals according to a common process **(the handoff)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine receiving first and second signals transmitted by respective ones of the first and second base stations at the wireless terminal; and processing the first and second received signals according to a common process as taught in Tiedemann with Fauconnier for a soft handoff.

With regard to claim 21, the combination of Fauconnier and Tiedemann discloses a method according to claim 14.

Tiedemann further discloses

receiving first and second signals transmitted from respective ones of the first and second nodes at the wireless terminal comprises receiving a composite **(combines)** signal including the first and second signals **(the mobile receives the signals from the set of base stations and combines them, col. 2, lines 10-12)**; and

processing the first and second signals according to a common process comprises processing the composite signal according to a RAKE process **(rake) (the digital data receivers cooperate with the diversity combiner/decoder to form a "rake" receiver structure, col. 7, lines 58-60; see also digital data receivers included in mobile, col. 7, lines 49-50)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine wherein receiving first and second signals transmitted from respective ones of the first and second nodes at the wireless terminal comprises receiving a composite signal including the first and second signals; and processing the first and second signals according to a common process comprises processing the composite signal according to a RAKE process as taught in Tiedemann with Fauconnier for a soft handoff.

With regard to claim 23, the combination of Fauconnier and Tiedemann discloses a method according to claim 14.

Tiedemann further discloses CDMA radio configuration **(CDMA, col. 1, line 10; see also col. 4, line 27)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine wherein receiving first and second signals transmitted from respective ones of the first and second nodes at the wireless terminal comprises receiving a composite signal including the first and second signals; and processing the first and second signals according to a common process comprises processing the composite signal according to a RAKE process as taught in Tiedemann with Fauconnier for a soft handoff.

Allowable Subject Matter

20. Claims 2,3,8,9,15,16,18,22,25,26,28,37,38,41,42,44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BW
May 25, 2007

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